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ABSTRACT

This report presents a study that examined the effects of symptom item formats on estimates of risk status across alternative attention deficit hyperactivity disorder (ADHD) behavior checklists for 38 referred children. The mean age of the children was 7 years 9 months. The study focused on ADHD risk as measured by two behavior checklists which were based on the Diagnostic and Statistical Manual of Mental Disorders Fourth Edition (DSM-IV) criteria. Items on one checklist were presented according to a symptom negative format while entries on the other checklist were phrased using a symptom positive format. The behavior checklists were distributed and completed by parents and teachers of the children in a counterbalanced order. Overall, the symptom negative item checklist resulted in an increased percentage of children estimated as being "at-risk" for ADHD. Additionally, the classification agreement between the two checklists was low. The report urges practitioners and researchers involved in ADHD screening to consider the potential effects of a negative item format. (Contains 13 references.) (CR)

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Classification of Risk Status in ADHD Screening: A Comparison of Symptom Item Formats on Behavior Checklists

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Abstract

The present study examined the effects of symptom item formats on estimates of risk status across alternative ADHD behavior checklists for 38 referred children. The study focused on ADHD risk as measured by two behavior checklists which were based on the Diagnostic and Statistical Manual of Mental Disorders Fourth Edition (DSM-IV) criteria. Items on one checklist were presented according to a symptom negative format while entries on the other checklist were phrased using a symptom positive format. Overall, the symptom negative item checklist resulted in an increased percentage of children estimated as being "at-risk" for ADHD. Additionally, the classification agreement between the two checklists was low. Although more empirical investigations are warranted, practitioners and researchers involved in ADHD screening may want to consider the potential effects of a symptom negative item format.

Classification of Risk Status in ADHD Screening: A Comparison of Symptom Item Formats on Behavior Checklists

Behavior reports are often afforded an important role in the identification and/or classification of child psychopathology (Martens, 1993). Although data from informant reports are not necessarily considered completely reliable or valid, they have been deemed essential in the assessment of Attention Deficit Hyperactivity Disorder (ADHD) (Edelbrock, 1988). Behavior checklists, which are often used during screening, typically require informants to judge the presence or absence of selected behaviors. These measures are a relatively simple, cost-effective method for assessing behavior but usually less superior to behavior rating scales which tend to measure the degree of behavior and possess stronger psychometric properties (e.g., Aiken, 1996; Cone & Hawkins, 1997; Mash & Terdal, 1982).

Parents and teachers of children exhibiting attentional-related difficulties are sometimes asked by practitioners to complete behavior checklists during screening. Items composing these checklists are often based on the Diagnostic and Statistical Manual for Mental Disorders-Fourth Edition (DSM-IV) ADHD criteria (American Psychiatric Association, 1994) and therefore presented according to a symptom negative format (e.g., "often has difficulty sustaining attention in tasks or play activities").

Previous concerns have been raised that screening methods employing a symptom negative item format may possess intentional bias toward identifying the suspected childhood disorder (Barnett & Carey, 1992). Such devices may promote a "search for psychopathology" resulting in over-identification and possibly unnecessary labeling (e.g., DuPaul & Stoner, 1994; McKinney, Montague, & Hocutt, 1993; Schotte, Maes, Cluydts, & Cosyns, 1996). Some authors have even recommended searching for disconfirming rather than confirming information during the initial data gathering process (Borum, Otto, & Golding, 1993). However, few empirical studies have actually examined the effects of symptom item formats on decision outcomes associated with ADHD screening.

The first purpose of this study was to examine whether a symptom negative item format on an ADHD behavior checklist based on DSM-IV criteria (American Psychiatric Association, 1994) would result in an increased percentage of referred children estimated to be "at-risk" for ADHD when compared to a similar form using a symptom positive item format. A secondary purpose of this research was to determine the classification agreement between the two checklists used to estimate child ADHD risk status.

METHOD

Participants

The participants consisted of parents and teachers of 38 children referred to a psychology practice in Northeast Arkansas for attentional-related difficulties. The mean age of the children was 7 years 9 months; 82% were male; and 82% were caucasian.

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Measures

Two behavior checklists (i.e., Form A and B) with items based specifically on the criteria for ADHD as defined by the DSM-IV (American Psychiatric Association, 1994) were designed and used to estimate child risk status. Both forms were composed of two parts. Part I consisted of symptom items organized according to the ADHD Predominately Inattentive Type while Part II was composed of symptom items representing the Predominantly Hyperactive-Impulsive Type. Each part contained nine items. Items on Form A were presented according to a symptom negative format while items on Form B were phrased using a symptom positive format. Each entry called for the informant to first read the item and indicate through a "yes" or "no" response whether it described the child's behavior over the last six months.

Procedure

The behavior checklists were distributed and completed by parents and teachers of the children in a counterbalanced order. Children were cross-classified as being potentially "at-risk" by the checklists. "At-risk" status on Form A was defined by six or more "yes" item responses on either or both parts of the checklist. "At-risk" status on Form B was defined by six or more "no" item responses on either or both parts of the measure. This cut-off was based on the DSM-IV ADHD criteria (American Psychiatric Association, 1994).

Data Analysis

Classification of risk status was evaluated in two ways. First, the percentage of children estimated to be "at-risk" by parents and teachers on Forms A and B was determined. Second, kappa, which represents the proportion of agreement between two classification procedures on both the presence and absence of risk status, corrected for chance agreement was used to examine classification agreement (Cohen, 1960; McDermott, 1988).

RESULTS

On Form A 95% of the children were estimated by the parents to be "at-risk" compared to 87% on Form B. Similarly, 87% of the children were estimated by the teachers to be "at-risk" on Form A contrasted with 74% on Form B. Overall, Form A, which was based entirely on a symptom negative item format, appeared to result in a greater percentage of children estimated to be "at-risk" for ADHD. When children were cross-classified based on the results obtained from Form A and B there was low agreement in regard to risk status. Specifically, the agreement between Form A and B completed by the parents yielded a kappa = .27 while the agreement between the two forms obtained by the teachers resulted in a kappa = .31.

CONCLUSION

These results tend to suggest that practitioners and researchers may want to further consider the potential effects of item formats when screening children using ADHD behavior checklists based on symptom negative DSM-IV criteria. A major limitation of

the study was the relatively small homogeneous sample. Additionally, the dichotomous response format used on the checklists may have increased the possibility of acquiescence. Finally, no attempt was made to examine the technical properties (i.e., reliability or validity) of the measures or to differentiate between ADHD subtypes. More empirical studies are needed to address the above limitations and the possible impact of a symptom item formats on decision outcomes associated with other behavior checklists, rating scales, self-report forms, structured interviews, and classifications.

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